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Flooded area and run-up height of tsunami triggered by the 2011 off the Pacific coast of Tohoku Earthquake

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We survey the flooding area and run-up height of tsunami triggered by the 2011 off the Pacific coast of Tohoku Earthquake by short-term fieldwork. Prior to field work, we interpreted air photos of post-tsunami disasters to select the sites for fieldwork, where the run-up heights of tsunami are much higher than those in other areas. In fieldwork we recognize upper limit of flooding area by witness of local people or by clear signs on surface such as disturbance of soil or the remaining floating matters.

The maximum run-up heights of tsunami are 30m over, 34.7m, 27.5m, 37.3m, 24m in Matsutsuki, Otonobe, Shigetube, Koriuchi and Mizusawa respectively. Leveling along the low-land in valley behind the bay shows that run-up height along the valley is higher toward inside gradually in Matsutsuki, and that is almost horizontal from the mouth to inside of the valley in Shirasaki.

It is clear by fieldwork that run-up heights of tsunami and longitudinal profile of its heights in each bays close to each other is different due to difference of topography of coastal submarine and land or trending of the bay. In presentation we will show the factor of difference of run-up heights of tsunami in each bays.

Keywords: Off the Pacific coast of Tohoku Earthquake, Tsunami, Run-up height, airphoto, Sanriku coast